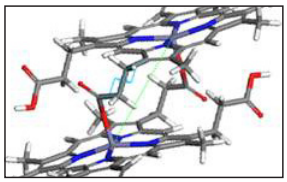
ALCC
ASCR Leadership Computing Challenge

at the Argonne Leadership Computing Facility

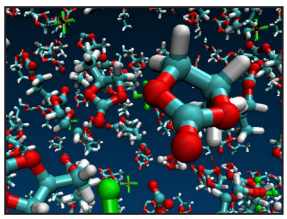
Open to scientists from the research community in academia and industry, the ASCR Leadership Computing Challenge (ALCC) program allocates up to 30 percent of the computational resources at the Argonne Leadership Computing Facility, NERSC and Oak Ridge. Projects in the program are of special interest to the Department, with an emphasis on high-risk, high-payoff simulations in areas directly related to the Department's energy mission, national emergencies, or for broadening the community of researchers capable of using leadership computing resources. Proposals are awarded an ALCC allocation based on a peer review for scientific merit and computational readiness.

For more information about ALCC and other programs at the ALCF, visit: http://www.alcf.anl.gov/collaborations/index.php.



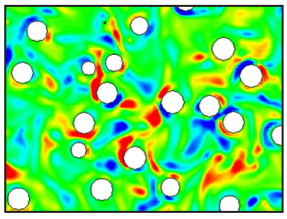
Materials Science
Toward Crystal Engineering from First Principles

PI: James Chelikowsky
University of Texas at Austin
ALCC Award: 12 million hours



Energy Technologies
First Principles Calculations of Interfaces in Electrical Energy Storage Systems

PI: Larry Curtiss
Argonne National Laboratory
ALCC Award: 30 million hours



Engineering
The Interactions Between Vaporizing Liquid Droplets and a Turbulent Flow: Fully Resolved Direct Numerical Simulation

PI: Said Elghobashi
University of California, Irvine
ALCC Award: 10 million hours

Argonne NATIONAL LABORATORY

CONTACT

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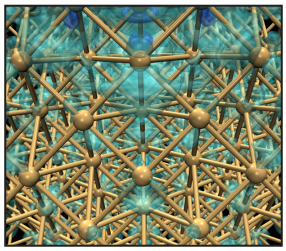
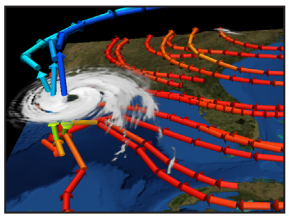


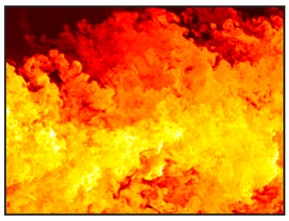
Chemistry
Electrocatalyst Durability from First Principles Calculations

PI: Jeffrey Greeley
Argonne National Laboratory
ALCC Award: 20 million hours



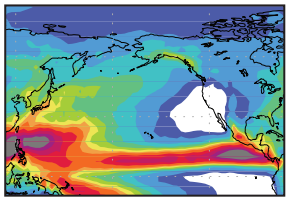
Earth Science
Simulating Regional Climate at Convection-permitting Resolution

PI: Greg Holland
National Center for Atmospheric Research (NCAR) Earth System Laboratory
ALCC Award: 13 million hours



Engineering
Prediction of Supersonic Jet Noise Using Large Eddy Simulation

PI: Parviz Moin
Stanford University
ALCC Award: 60 million hours



Earth Science
Sensitivity and Uncertainty of Precipitation of a Climate Model

PI: Laura Zamboni
Argonne National Laboratory
ALCC Award: 40 million hours

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U.S. DEPARTMENT OF ENERGY

February 2012
alcf-alcc_list-0212